

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for providing substantially intimate rolling contact between a donor sheet and an acceptor element in a laser-induced thermal transfer printer, the apparatus comprising:

a rotatably mounted cylindrical drum;

an acceptor element affixed to and supported by the cylindrical drum;

a rotatably mounted dispensing roller ~~for dispensing a donor sheet;~~

a rotatably mounted receiving roller ~~for receiving the donor sheet, the donor sheet being extended between the dispensing roller and the receiving roller;~~

a donor sheet dispensed by the dispensing roller and received by the receiving roller, wherein the donor sheet is adapted to move uni-directionally perpendicular to a longitudinal axis of the drum;

a plurality of rotatably mounted contact rollers configured to bring a portion of the donor sheet extended between the dispensing roller and the receiving roller into substantially coextensive contact along the width of ~~a portion of~~ the acceptor element; and

a laser imaging head adapted to move parallel to ~~[[a]] the~~ longitudinal axis of the drum and relative to the donor sheet and acceptor element, and wherein the laser imaging head does not contact the donor sheet or the acceptor element.

2. (Previously Presented) The apparatus of claim 1, wherein the acceptor element is affixed to an external surface of the cylindrical drum.

3. (Currently Amended) The apparatus of claim 2, wherein the plurality of contact rollers comprises a first contact roller in contact with the cylindrical drum and a second contact roller in contact with the cylindrical drum, wherein the portion of the donor sheet brought into substantially coextensive contact along the width of ~~with the portion of~~ the acceptor element is a portion of the donor sheet located between the first contact roller and second contact roller.
4. (Original) The apparatus of claim 3, wherein the first contact roller is located proximate to the dispensing roller and the second contact roller is located proximate to the receiving roller.
5. (Original) The apparatus of claim 3, wherein the cylindrical drum, dispensing roller, receiving roller and contact rollers rotate in a synchronous manner.
6. (Currently Amended) The apparatus of claim 3, wherein the laser imaging head provides scanning laser energy to transfer material from the donor sheet to the acceptor element to form a representation of an image on the acceptor element, and wherein the portion of the donor sheet brought into substantially coextensive contact along the width of ~~with the portion of~~ the acceptor element is the portion of the donor sheet located proximate to the laser imaging head.
7. (Original) The apparatus of claim 1, wherein the donor sheet comprises a transfer layer comprising a photothermal converter.

8. (Original) The apparatus of claim 1, wherein the donor sheet comprises a transfer layer and a layer adjacent to the transfer layer which comprises a photothermal converter.

9. (Previously Presented) The apparatus of claim 1, wherein the apparatus does not comprise pressure plates to press the donor sheet and the acceptor element into substantially coextensive contact.

10. (Currently Amended) The apparatus of claim 1, wherein the apparatus comprises a projection area, and substantially coextensive contact between the portion of the donor sheet and the width of the portion of the acceptor element covers a substantial arcuate section comprising the projection area.

11. - 17. (Cancelled)

18. (Currently Amended) A method for providing substantially intimate rolling contact between a donor sheet and an acceptor element in a laser-induced thermal transfer printer, comprising:

rotatably mounting a cylindrical drum;

affixing an acceptor element to the cylindrical drum so that the acceptor element is supported by the cylindrical drum;

rotatably mounting a dispensing roller ~~for dispensing a donor sheet;~~

rotatably mounting a receiving roller ~~for receiving the donor sheet, the donor sheet being configured to be extended between the dispensing roller and receiving roller;~~

extending a donor sheet between the dispensing roller and the receiving roller, wherein the donor sheet is adapted to move uni-directionally perpendicular to a longitudinal axis of the drum;

rotatably mounting a plurality of contact rollers configured to bring a portion of the donor sheet extended between the dispensing roller and receiving roller into substantially coextensive contact along the width of ~~a portion of~~ the acceptor element wherein the contact rollers are stationary with respect to the longitudinal axis of the drum; and

mounting a laser imaging head to move along a longitudinal axis of the cylindrical drum and relative to the donor sheet and acceptor element, wherein the laser imaging head does not contact the donor sheet or the acceptor element.

19. (Previously Presented) The method of claim 18, wherein affixing the acceptor element to the cylindrical drum comprises affixing the acceptor element to an external surface of the cylindrical drum.

20. (Currently Amended) The method of claim 19, wherein the mounting of the plurality of contact rollers comprises mounting a first contact roller in contact with the cylindrical drum and a second contact roller in contact with the cylindrical drum, wherein the portion of the donor sheet brought into substantially coextensive contact along the width of ~~with the portion of~~ the acceptor element is configured to be a portion of the donor sheet located between the first contact roller and second contact roller.

21. (Previously Presented) The method of claim 20, wherein mounting the plurality of contact rollers comprises mounting the first contact roller proximate to the dispensing roller and mounting the second contact roller proximate to the receiving roller.

22. (Original) The method of claim 20, comprising rotating the cylindrical drum, dispensing roller, receiving roller and contact rollers in a synchronous manner.

23. (Currently Amended) The method of claim 20, wherein the laser imaging head provides scanning laser energy to transfer material from the donor sheet to the acceptor element to form a representation of an image on the acceptor element, and wherein the portion of the donor sheet brought into substantially coextensive contact along the width of ~~with the portion of~~ the acceptor element is configured to be the portion of the donor sheet located generally proximate to the laser imaging head.

24. (Original) The method of claim 18, wherein the donor sheet comprises a transfer layer comprising a photothermal converter.

25. (Original) The method of claim 18, wherein the donor sheet comprises a transfer layer and a layer adjacent to the transfer layer which comprises a photothermal converter.

26. (Previously Presented) The method of claim 18, wherein the method does not comprise providing pressure plates to press the donor sheet and the acceptor element into substantially coextensive contact.

27. (Currently Amended) The method of claim 18, wherein ~~the laser-induced thermal transfer printer comprises a projection area, and substantially~~ coextensive contact between the portion of the donor sheet and the width of the portion of the acceptor element covers a substantial arcuate section ~~comprising the projection area.~~

28. – 36. (Cancelled)

37. (Currently Amended) The method of claim 18, wherein the substantially coextensive contact between ~~portions~~ the portion of the donor sheet and the acceptor element includes contact points and non-contact areas, and wherein material is transferred across the contact points and across the non-contact areas.

38. (Cancelled)

39. (Original) An apparatus for providing substantially intimate rolling contact between a portion of a donor sheet and a portion of an acceptor element in a laser-induced thermal transfer printer, the apparatus comprising a plurality of units, each unit comprising:

a laser imaging head;

a rotatably mounted cylindrical drum;

an acceptor element affixed to and supported by a curved section of the cylindrical drum;

a rotatably mounted dispensing roller for dispensing a donor sheet;

a rotatably mounted receiving roller for receiving the donor sheet, the donor sheet being extended between the dispensing roller and the receiving roller; and

a plurality of rotatably mounted contact rollers configured to bring a portion of the donor sheet extended between the dispensing roller and the receiving roller into contact with a portion of the acceptor element, wherein the laser imaging head does not contact the donor sheet and does not contact the acceptor element, wherein the plurality of units comprises pairs of units comprising a first unit and a second unit, wherein the acceptor element is extended between a contact roller on the first unit and a free-rotating transfer drum, and wherein the acceptor element is extended between the free-rotating transfer drum and a contact roller on the second unit.

40. (Cancelled)

41. (Currently Amended) An apparatus for transferring material between a donor sheet and an acceptor element in a laser-induced thermal transfer printer, comprising:

a rotatably mounted cylindrical drum ~~adapted to receive an acceptor element;~~
an acceptor element received by the drum;

a rotatably mounted dispensing roller ~~adapted to dispense a donor sheet;~~

a rotatably mounted receiving roller ~~adapted to receive the donor sheet, the donor sheet being adapted to be extended between the dispensing roller and receiving roller;~~

a donor sheet dispensed by the dispensing roller and received by the receiving roller;

a plurality of rotatably mounted contact rollers adapted to bring a portion of the donor sheet extended between the dispensing roller and receiving roller into contact

along the width of a ~~portion of the acceptor element~~ wherein the contact rollers are stationary with respect to the longitudinal axis of the drum; and

a laser imaging head adapted to move parallel to a longitudinal axis of the drum and relative to the donor sheet and acceptor element, wherein the laser imaging head does not contact the donor sheet or the acceptor element.